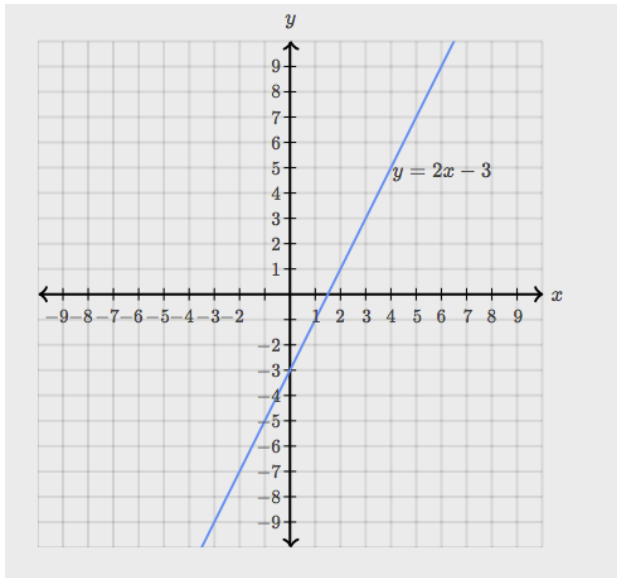


Linear and quadratic systems



A linear equation is graphed to the left. Which of the following equations combines with the graphed equation to create a system of equations whose solution set is comprised of the points $(-1, -5)$ and $(3, 3)$?

A $y = x^2 - 6$

B $y = 6 - x^2$

C $y = 4 - x^2$

D $y = x^2 - 4$

Which of the following represents all solutions (x, y) to the system of equations shown below?

$$y = x - 2$$

$$y = x^2 - x - 5$$

A $(3, -1)$

B $(-3, 1)$

C $(-3, -5)$ and $(1, -1)$

D $(3, 1)$ and $(-1, -3)$

Which of the following represents all solutions (x, y) to the system of equations shown below?

$$y + x = 6$$

$$y = x^2 - 2x - 6$$

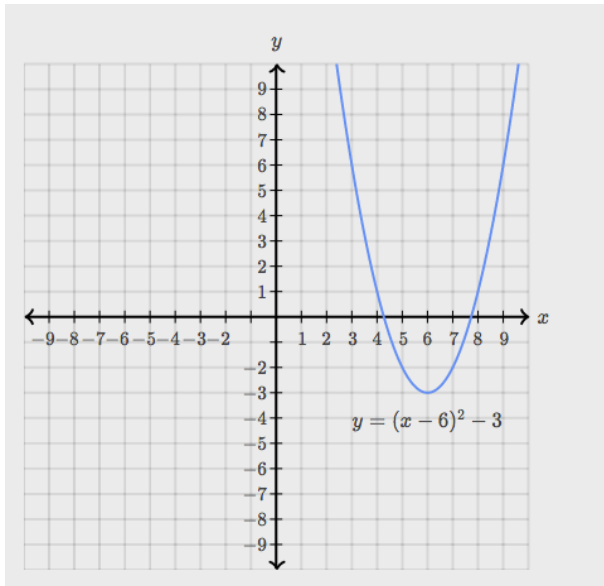
A $(-4, 10)$ and $(3, 3)$

B $(4, 2)$ and $(-3, 9)$

C $(4, -3)$

D $(-4, 3)$

Linear and quadratic systems



A quadratic equation is graphed to the left. Which of the following represents all solutions (x, y) to the system of equations created by the equation of this graph and the linear equation $y = x - 7$?

A (4, 1) and (9, 6)

B (5, -2) and (8, 1)

C (5, -2) and (9, 6)

D (3, 6) and (8, 1)

$$-7x^2 = (y + 5)(y - 5)$$

$$5y = 15x$$

If (a, b) is a solution to the system of equations shown above and $a > 0$, what is the value of a ?